



P.B.5818 - Patentlaan 2  
2280 HV Rijswijk (ZH)  
☎ +31 70 340 2040  
TX 31651 epo nl  
FAX +31 70 340 3016

Europäisches  
Patentamt

Zweigstelle  
in Den Haag  
Recherchen-  
abteilung

European  
Patent Office

Branch at  
The Hague  
Search  
division

Office européen  
des brevets

Département à  
La Haye  
Division de la  
recherche

Greenwood, John David  
Graham Watt & Co.  
Riverhead  
Sevenoaks  
Kent TN13 2BN  
GRANDE BRETAGNE

Datum/Date

31.08.00

Zeichen/Ref./Réf. 13865.jdg	Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n° 00301199.6-2113-
Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire Aoki Corporation	

COPY

## COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☐ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

The following specifications given by the applicant have been approved by the Search Division:

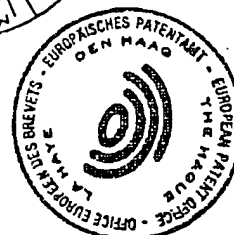
☒ abstract

☒ title

☐ The abstract was modified by the Search Division and the definitive text is attached to this communication.

The following figure will be published together with the abstract:

4



## REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number  
EP 00 30 1199

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	GB 2 293 776 A (KUBOYAMA NOBUYOSHI) 10 April 1996 (1996-04-10) Description * figures *	1,2,4,7	B01D5/00 F25B21/02 B01D11/02
Y	US 4 586 342 A (MORISHITA MASAO ET AL) 6 May 1986 (1986-05-06) * column 2, line 35 - column 5, line 28; figures *	1,2,4,7	
Y	US 4 506 510 A (TIRCOT MICHEL) 26 March 1985 (1985-03-26) * the whole document *	1,2,7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B01D F25B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 24 August 2000	Examiner Plaka, T
<div>CATEGORY OF CITED DOCUMENTS</div> <div><div><div>X : particularly relevant if taken alone</div><div>Y : particularly relevant if combined with another document of the same category</div><div>A : technological background</div><div>O : non-written disclosure</div><div>P : intermediate document</div></div><div><div>T : theory or principle underlying the invention</div><div>E : earlier patent document, but published on, or after the filing date</div><div>D : document cited in the application</div><div>L : document cited for other reasons</div><div>&amp; : member of the same patent family, corresponding document</div></div></div>			

1

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 30 1199

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

24-08-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2293776 A	10-04-1996	US 5572923 A	12-11-1996
		US 5558006 A	24-09-1996
		FR 2723323 A	09-02-1996
		JP 2848801 B	20-01-1999
		JP 9248138 A	22-09-1997
US 4586342 A	06-05-1986	NONE	
US 4506510 A	26-03-1985	FR 2528321 A	16-12-1983

REPUBLIC OF FRANCE

# PRELIMINARY SEARCH REPORT

NATIONAL INSTITUTE  
of  
INDUSTRIAL PROPERTY

Established on the basis of the latest  
claims filed before start of the research

National  
Registration N°  
FA 566103  
FR 9815059

DOCUMENTS CONSIDERED TO BE RELEVANT		Claims concerned of the examined application
Category	Mention of the document with indication of the relevant portions, where necessary	
X	FR 623 717 A (MICHOT-DUPONT) June 29, 1927 (1927-06-29) * the whole document *	1,2
Y	---	3
Y	US 5,146,693 A (DOTTOR GIAMBATTISTA ET AL) September 15, 1992 (1992-09-15) * the whole document *	3
		TECHNICAL FIELDS SEARCHED (Int. Cl. <sup>6</sup> )  B01D F28B D06F
Date of completion of the research August 23, 2000		Examiner Plaka, T
CATEGORY OF THE CITED DOCUMENTS :  X : particularly relevant on its own Y : particularly relevant when combined with another document of the same category A : Technological background O : Unwritten disclosure P : Intervening document		T : Theory of principle forming the basis of the invention E : Prior patent document but published on or after the filing date D : Cited in the application L : Cited for other reasons & : Member of the same group, corresponding document.



# RAPPORT DE RECHERCHE PRÉLIMINAIRE

établi sur la base des dernières revendications  
déposées avant le commencement de la recherche

N° d'enregistrement  
national

FA 566103  
FR 9815059

DOCUMENTS CONSIDÉRÉS COMME PERTINENTS		Revendication(s) concernée(s)	Classement attribué à l'invention par l'INPI
Catégorie	Citation du document avec indication, en cas de besoin, des parties pertinentes		
X	FR 623 717 A (MICHOT-DUPONT) 29 juin 1927 (1927-06-29) * le document en entier *	1, 2	F28B1/00 F26B3/02 F26B21/02 B01D3/38 B01D43/00
Y	---	3	
Y	US 5 146 693 A (DOTTOR GIAMBATTISTA ET AL) 15 septembre 1992 (1992-09-15) * le document en entier * -----	3	
			DOMAINES TECHNIQUES RECHERCHÉS (Int.CL.7)
			B01D F28B D06F
Date d'achèvement de la recherche		Examineur	
23 août 2000		Plaka, T	
CATÉGORIE DES DOCUMENTS CITÉS			
X : particulièrement pertinent à lui seul Y : particulièrement pertinent en combinaison avec un autre document de la même catégorie A : arrière-plan technologique O : divulgation non-écrite P : document intercalaire		T : théorie ou principe à la base de l'invention E : document de brevet bénéficiant d'une date antérieure à la date de dépôt et qui n'a été publié qu'à cette date de dépôt ou qu'à une date postérieure. D : cité dans la demande L : cité pour d'autres raisons ..... & : membre de la même famille, document correspondant	



OFICINA ESPAÑOLA  
DE PATENTES Y MARCAS  
ESPAÑA

⑪ ES 2 152 850

⑫ N.º solicitud: 009802046

⑬ Fecha de presentación de la solicitud: 01.10.1998

⑭ Fecha de prioridad: 12.01.1998  
12.02.1998

## INFORME SOBRE EL ESTADO DE LA TECNICA

⑮ Int. Cl.º: F26B 3/02, 21/02, F28B 1/00, B01D 3/38, 43/00

### DOCUMENTOS RELEVANTES

Categoría	Documentos citados	Reivindicaciones afectadas
Y	GB 2293776 A (NOBUYOSHI KUBOYAMA) 10.04.1996, página 6, línea 13 - página 12, línea 23; figuras 1-7.	1-5,8-12
Y	US 4776104 A (KUOYAMA) 11.10.1988, todo el documento.	1-3,5, 8-12
Y	FR 569368 A (GINKEL) 11.04.1924, todo el documento.	1-5,8-12
X Y	FR 623717 A (MICHOT-DUPONT) 29.06.1927, todo el documento.	13,14 15,17
X Y	US 5146693 A (DOTTOR et al.) 15.09.1992, todo el documento.	16 15,17

#### Categoría de los documentos citados

X: de particular relevancia

Y: de particular relevancia combinado con otro/s de la misma categoría

A: refleja el estado de la técnica

O: referido a divulgación no escrita

P: publicado entre la fecha de prioridad y la de presentación de la solicitud

E: documento anterior, pero publicado después de la fecha de presentación de la solicitud

#### El presente informe ha sido realizado

☒ para todas las reivindicaciones

☐ para las reivindicaciones nº:

Fecha de realización del informe  
27.12.2000

Examinador  
R. San Vicente Domingo

Página  
1/1



Application No: GB 9814386.0  
Claims searched: 16, 17 & 19

Examiner: Michael R. Wendt  
Date of search: 23 November 1998

**Patents Act 1977**  
**Further Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.P): B1B (BDD, BMB1, BX, B2H)

Int CI (Ed.6): B01D 5/00; F28B 1/00, 1/02, 1/06; D06F 58/24

Other: Online: WPI, Claims

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	US 5146693 (ZANUSSI) e.g. see Column 2 lines 44 etc. Figures 1 & 2.	16

X Document indicating lack of novelty or inventive step  
Y Document indicating lack of inventive step if combined with one or more other documents of same category.

& Member of the same patent family

A Document indicating technological background and/or state of the art.  
P Document published on or after the declared priority date but before the filing date of this invention.  
E Patent document published on or after, but with priority date earlier than, the filing date of this application.



Application No: GB 9814386.0  
Claims searched: 13 - 15

Examiner: Michael R. Wendt  
Date of search: 23 November 1998

**Patents Act 1977**  
**Further Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.P): B1B (BDD, BMB1, BX, B2H)

Int Cl (Ed.6): B01D 5/00; F28B 1/00, 1/02, 1/06

Other:

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
X	GB 1435490 (GALINDALE) e.g. see Figure 1 & page 1 at lines 53 etc..	13 & 15.
X	WO 80/01881 A1 (TECATOR) e.g. see Figure 1.	13
X	US 4678028 (INTERTEC ASSOC.) e.g. see Figure 3.	---"

X Document indicating lack of novelty or inventive step  
Y Document indicating lack of inventive step if combined with one or more other documents of same category.

& Member of the same patent family

A Document indicating technological background and/or state of the art.  
P Document published on or after the declared priority date but before the filing date of this invention.  
E Patent document published on or after, but with priority date earlier than, the filing date of this application.





INVESTOR IN PEOPLE

Application No: GB 0126971.1  
Claims searched: 1-17

Examiner: Fiona Warner  
Date of search: 21 November 2001

## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.S): B1B

Int Cl (Ed.7): B01D (5/00)

Other: Online (EPODOC, WPI, PAJ)

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	GB 2293776 A (KUBOYAMA)	
A	GB 1435490 A (GALINDALE)	
A	WO 80/01881 A1 (TECATOR)	
A	US 5572923 A (KUBOYAMA)	
A	US 5558006 A (KUBOYAMA)	

X Document indicating lack of novelty or inventive step  
Y Document indicating lack of inventive step if combined with one or more other documents of same category.  
& Member of the same patent family

A Document indicating technological background and/or state of the art.  
P Document published on or after the declared priority date but before the filing date of this invention.  
E Patent document published on or after, but with priority date earlier than, the filing date of this application.